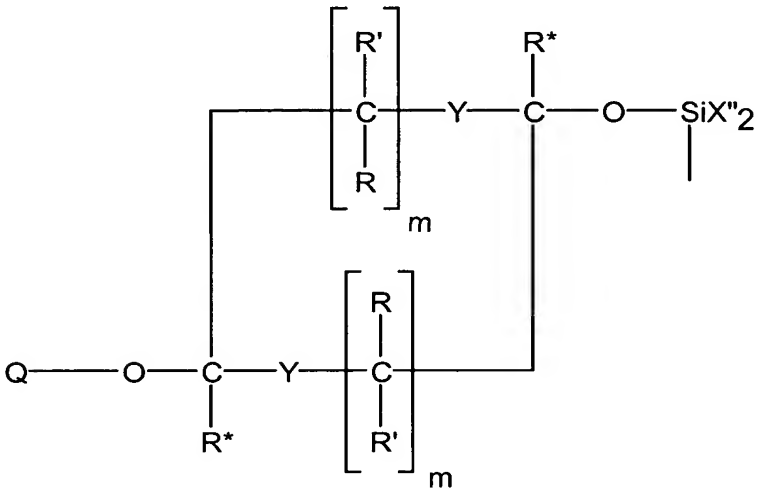
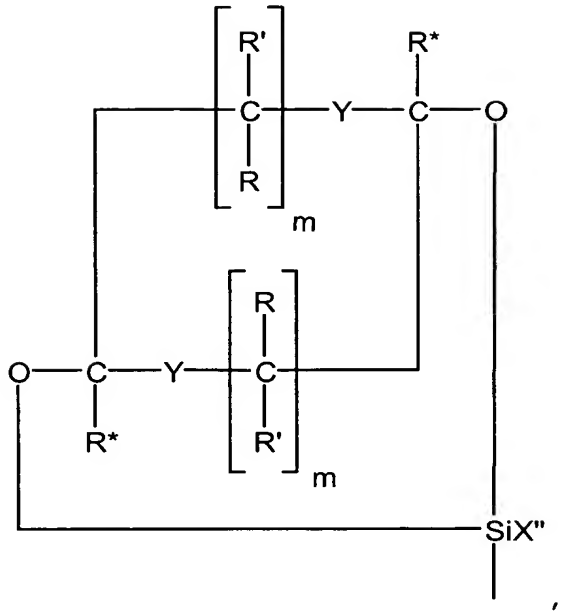
WHAT IS CLAIMED IS:

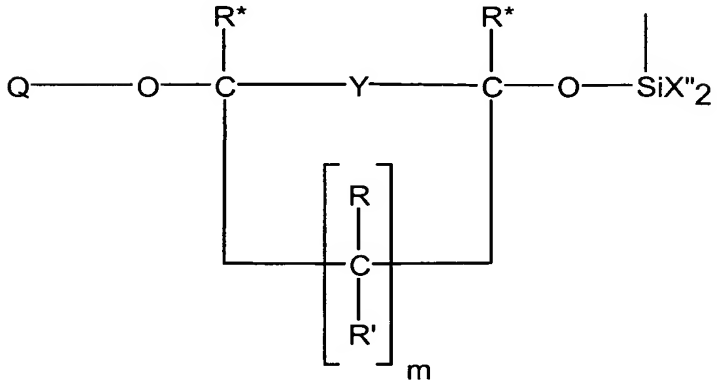
1. A polymer which is comprised of polymer chains having at least one modified silane moiety bonded thereto, wherein said modified silane moiety is of a structural formula selected from the group consisting of:



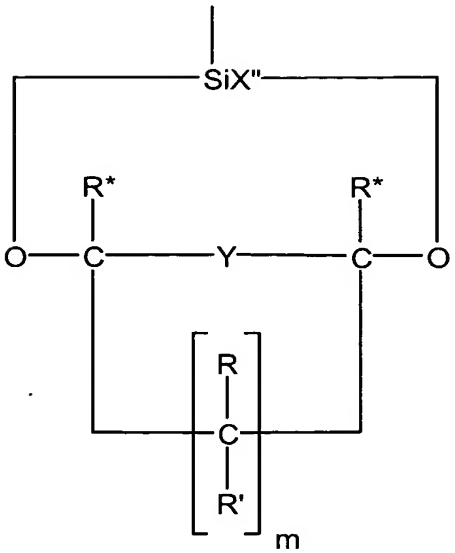
(1) ,



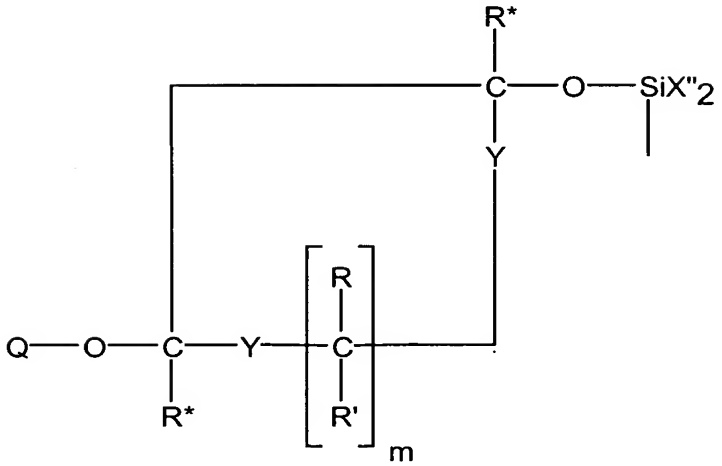
(2) ,



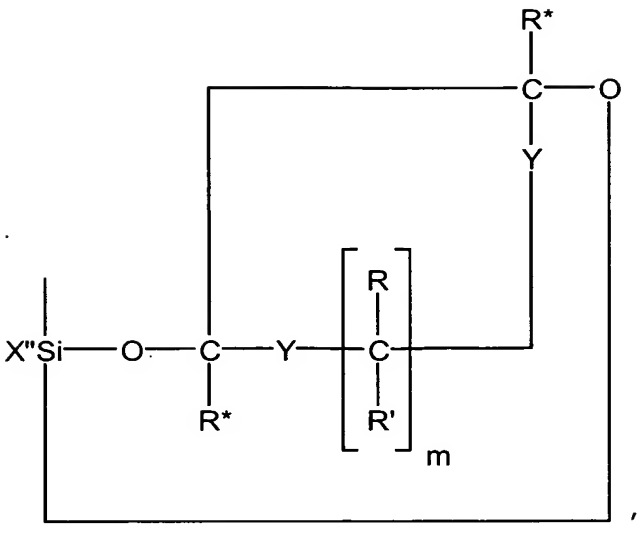
(3) ,



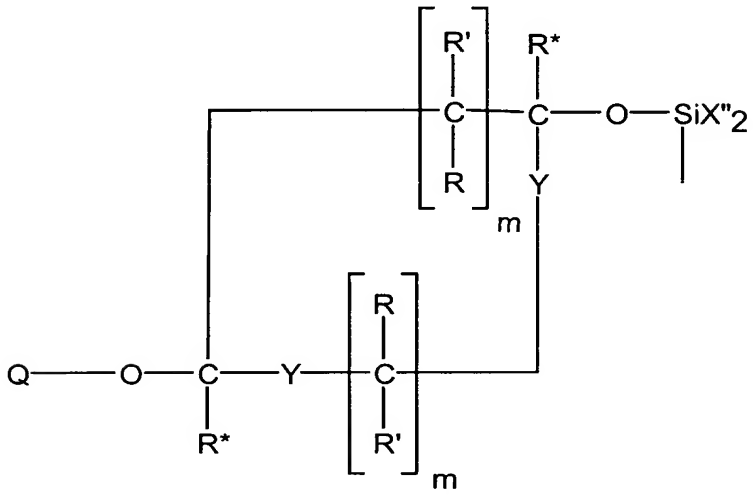
(4)



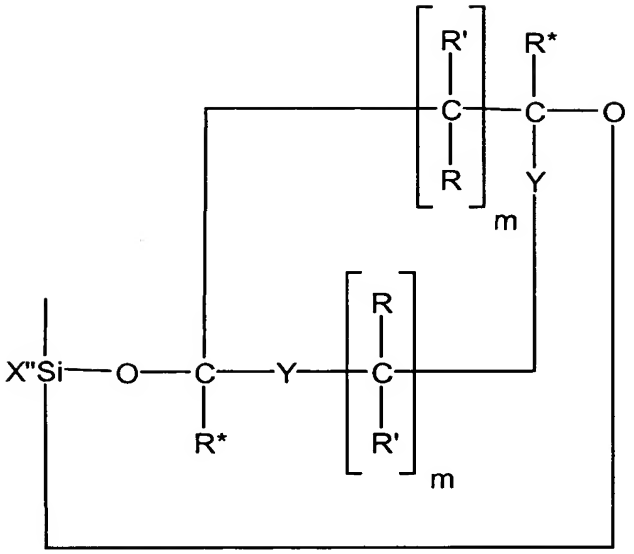
(5)



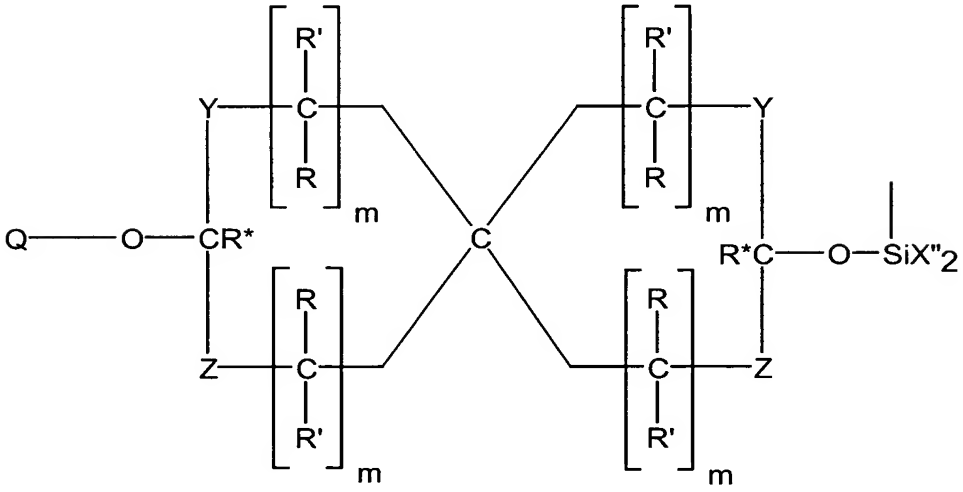
(6) ,



(7) ,

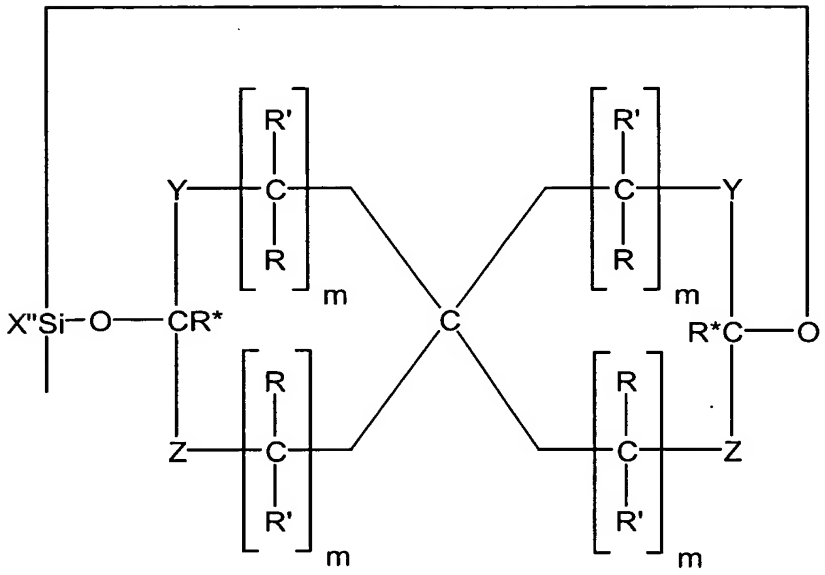

R'
R*
C
C
O
R
Y
m
R
X"Si
O
C
Y
C
R*
R'
m

(8) ,


R'
Y
C
R
m
R'
C
Y
R
m
Q
O
CR*
C
R*C
O
SiX"2
R
Z
C
R'
m
R
C
Z
R'
m

(9) ,

and

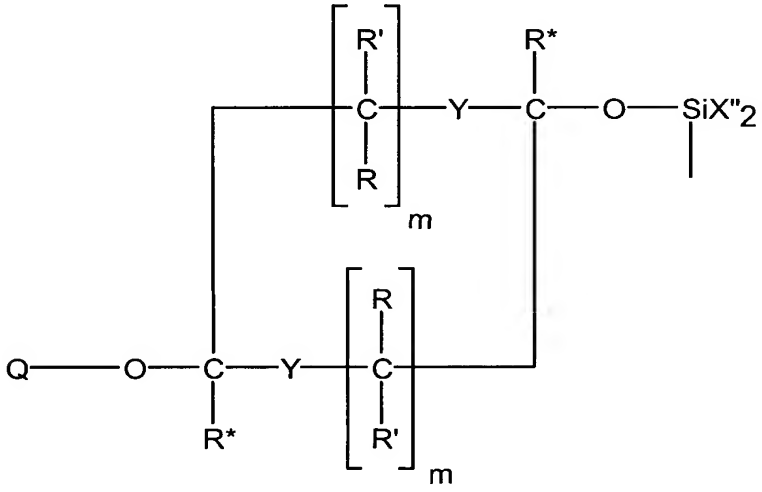


(10)

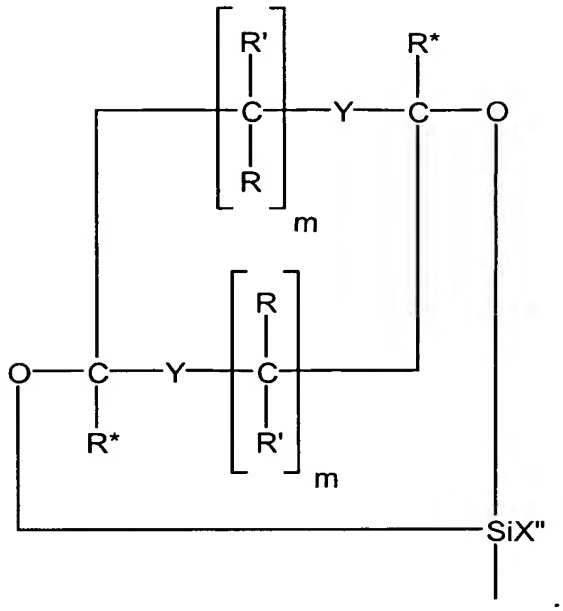
wherein m represents an integer from 1 to about 20; wherein X" groups can be the same or different; wherein X" represents a chemical moiety; wherein Q is selected from the group consisting of hydrogen atoms and $X"_2Si$-; wherein R and R' can be the same or different and are selected from the group consisting of hydrogen atoms, alkyl groups containing from 1 to about 12 carbon atoms, aryl groups containing from about 6 to about 18 carbon atoms, alkaryl groups containing from 7 to about 18 carbon atoms, alkoxy groups containing from 1 to about 18 carbon atoms, hydroxy groups, and halide atoms; wherein R* is selected from the group consisting of hydrogen atoms, alkyl groups containing from 1 to about 12 carbon atoms, aryl groups containing from about 6 to about 18 carbon atoms, and alkaryl groups containing from 7 to about 18 carbon atoms; wherein R, R', and R* can be bonded together in any combination in cases where R, R', R", and R* are not hydrogen atoms, halide atoms, or hydroxy groups; wherein Y represents a moiety selected from the group consisting of oxygen, sulfur, nitrogen, and phosphorus; wherein Z represents a moiety

selected from the group consisting of C(R)R', oxygen, sulfur, nitrogen, and phosphorus; wherein the contiguous cyclic ring in formulas (1), (2), (3), (4), (5), (6), (7), (8), (9), and (10) can contain heteroatoms selected from the group consisting of oxygen, sulfur, nitrogen, phosphorus, and silicon in cases where m represents an integer greater than 1; wherein the contiguous cyclic ring in formulas (1), (2), (3), (4), (5), (6), (7), (8), (9), and (10) can be saturated or unsaturated in cases where m represents an integer greater than 1; wherein said alkyl groups, aryl groups, alkaryl groups, and alkoxy groups can contain halide atoms and heteroatoms selected from the group consisting of oxygen, sulfur, nitrogen, phosphorus, and silicon.

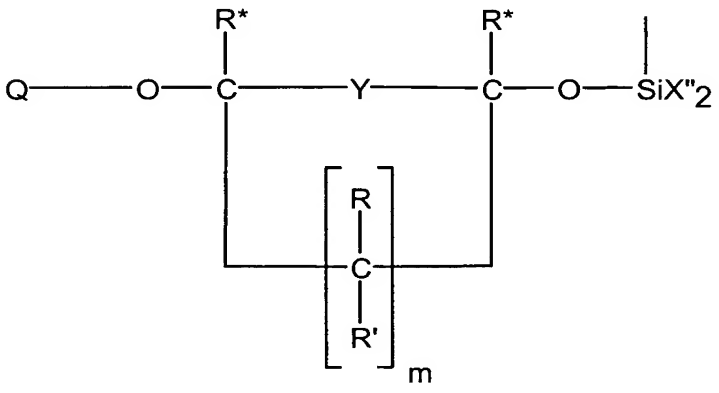
2. A polymer as specified in claim 1 wherein the modified silane moiety is of the structural formula:



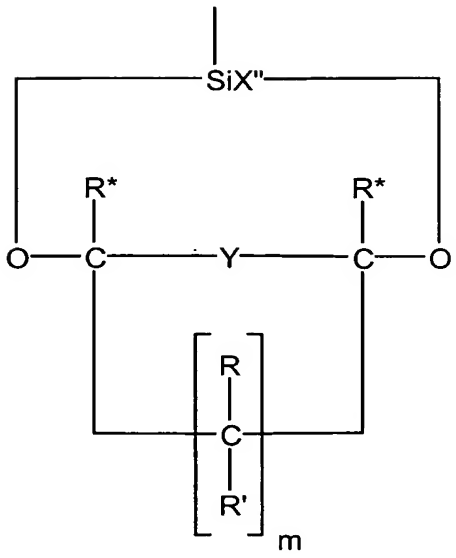
3. A polymer as specified in claim 1 wherein the modified silane moiety is of the structural formula:



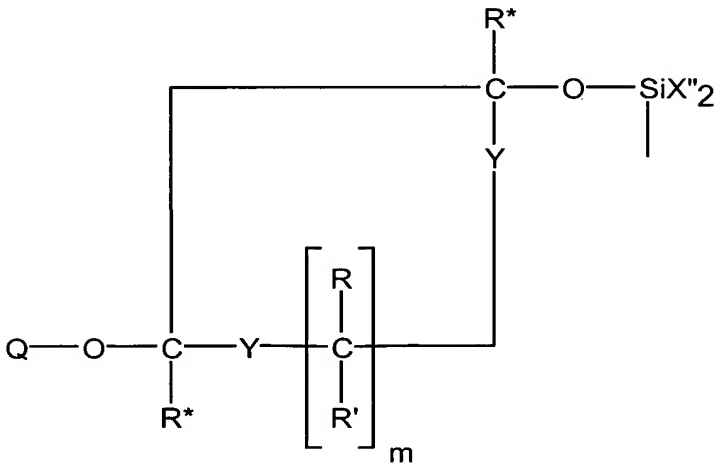
4. A polymer as specified in claim 1 wherein the modified silane moiety is of the structural formula:



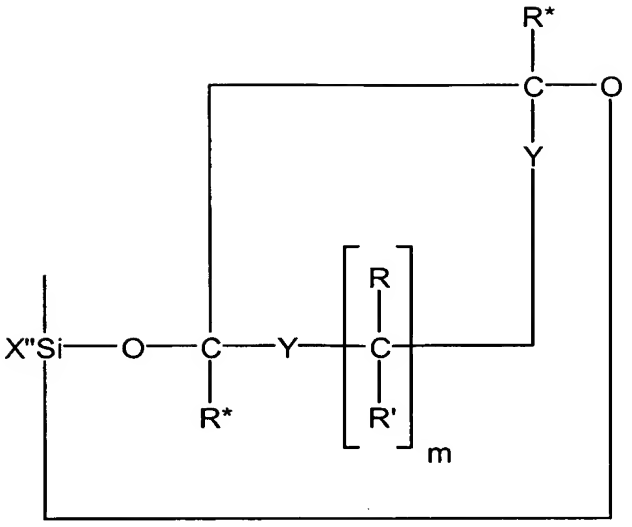
5. A polymer as specified in claim 1 wherein the modified silane moiety is of the structural formula:



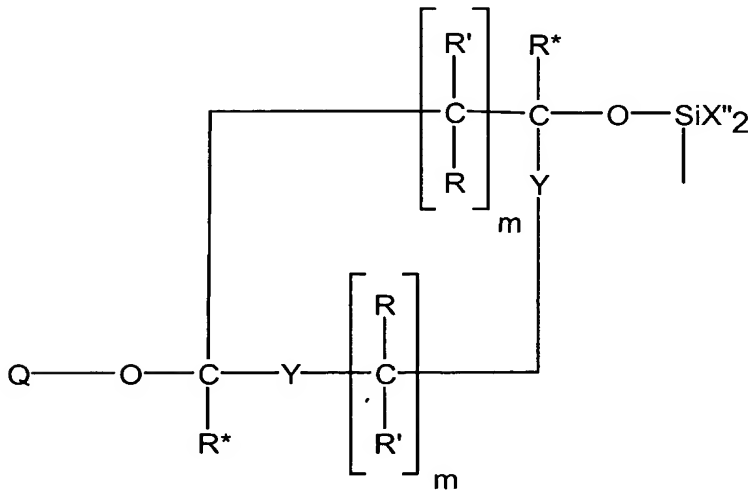
6. A polymer as specified in claim 1 wherein the modified silane moiety is of the structural formula:



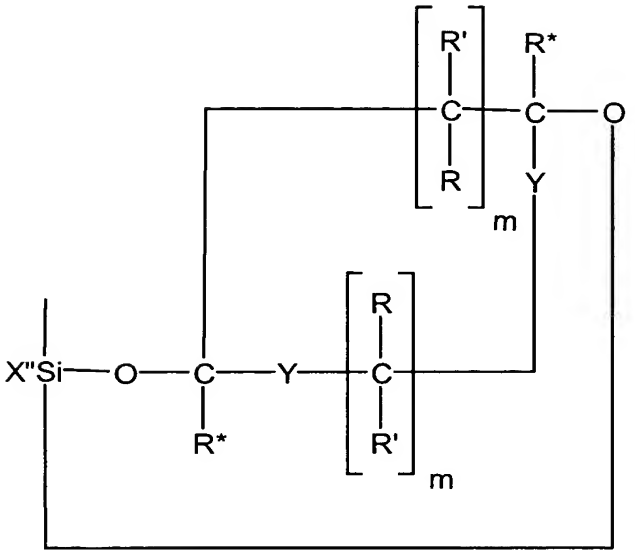
7. A polymer as specified in claim 1 wherein the modified silane moiety is of the structural formula:



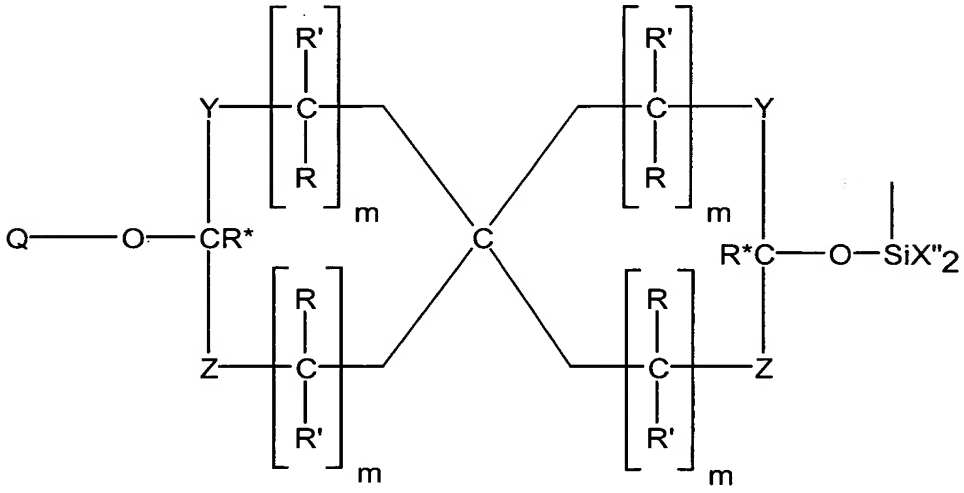
8. A polymer as specified in claim 1 wherein the modified silane moiety is of the structural formula:



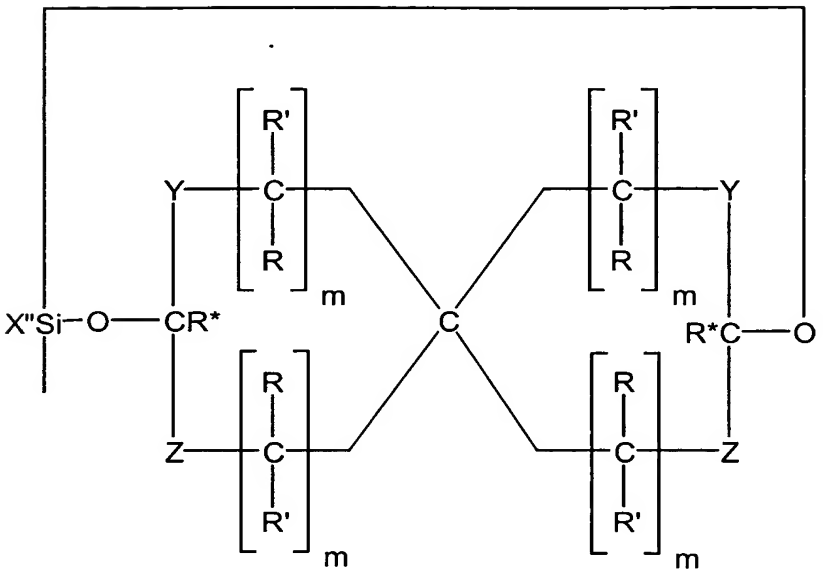
9. A polymer as specified in claim 1 wherein the modified silane moiety is of the structural formula:



10. A polymer as specified in claim 1 wherein the modified silane moiety is of the structural formula:



11. A polymer as specified in claim 1 wherein the modified silane moiety is of the structural formula:



12. A polymer as specified in claim 2 wherein Y is oxygen.

13. A polymer as specified in claim 3 wherein Y is oxygen.

14. A polymer as specified in claim 4 wherein Y is oxygen.

15. A polymer as specified in claim 5 wherein Y is oxygen.

16. A polymer as specified in claim 6 wherein Y is oxygen.

17. A polymer as specified in claim 7 wherein Y is oxygen.

18. A polymer as specified in claim 8 wherein Y is oxygen.

19. A polymer as specified in claim 9 wherein Y is oxygen.

20. A polymer as specified in claim 10 wherein Y is oxygen and Z is C(R)R'.